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BRITISH COLUMBIA

DOCUMENTING SHIPWRECKS

SHIPWRECK RECORDING GUIDE

Province of British Columbia
HON. DARLENE MARZARI
MINISTER RESPONSIBLE FOR CULTURE
ARCHAEOLOGY BRANCH

ARCHAEOLOGY BRANCH

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The B.C. Shipwreck recording forms and Guide reflect the suggestions of avocational underwater archaeologists, maritime museum staff, nautical archaeologists, and underwater cultural resource managers.

This project was initiated by Brian Apland **(Director, Archaeology Branch)** *and Tom Beasley (then-President of the* **Underwater Archaeological Society of B.C.***), who recognized the need for specialised shipwreck site inventory forms.*

This work follows the lead and inspiration provided by Paul Collins, Calum Ewing, Robert Ogilvie, et al. (Special Places Program, Nova Scotia Museum) with the Nova Scotia Shipwreck Inventory and Database.

The Basic form has been field tested by the **UASBC** *during the Howe Sound/Burrard Inlet Survey Project (1991), under the direction of Brian Provost.* **UASBC** *members Jacques Marc (Explorations Director) and David Stone (Archivist) are owed special thanks for their detailed comments. Tom Beasley and Mike Paris (President) have consistently shown support for this project.*

Constructive comments were received from Chris Amer (Head, Underwater Archaeology Division, South Carolina Institute of Nautical Archaeology), Ian Oxley (Archaeological Diving Unit, St. Andrews, U.K.), and Maurice Smith (Curator, Marine Museum of the Great Lakes, Kingston). The Detailed form was field tested by members of the San Augustin Institute, of California, under the direction of Marco Meniketti (personal communication November, 1990).

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Grant Carder (Nautical Archaeologist) whose untimely death preceded publication, was a major contributor throughout this project, and without his assistance the Guide and Forms could not have been completed. He helped edit the text and drafted most of the illustrations.

CHARLES MOORE
(Nautical Archaeologist - UASBC)
APRIL, 1991

PREFACE

This Guide accompanies the **'Detailed'** and **'Basic'** British Columbia Shipwreck Survey Forms.

The **'Basic'** form is intended for a survey project limited by time, size of crew, or crew inexperience.

The **'Detailed'** form is used for systematic surveys or excavations. Fields used only on the Detailed form are distinguished with double asterisks (**) in the guide. Some fields are repeated on both forms **(Eg. B1-B9).**

Both forms are printed on waterproof paper to best stand up to the rigours of fieldwork. Examples of both forms are provided in Appendix 3.

Information is intended for entry into a computerized database, accessed through the **Canadian Heritage Information Network (CHIN),** and will assist in: the matching of unidentified wreck remains with archivally known wrecks, the cataloguing of wrecks in Canadian coastal waters, the making of management decisions regarding this cultural resource, and the creation of an accessible database for maritime research across Canada.

Both forms are intended to supplement normal field notes, photographic records, and maps. The repository for this information should be noted on whichever form is used.

Please note, that the **Canada Shipping Act (R.S. Can. 1985, c.S-9, Part VI)** prohibits removal of any artifacts from wreck sites without a permit. The unauthorized removal of artifacts or excavation is not encouraged and contravenes **Provincial Heritage Legislation.** Information relating to the existence, whereabouts and condition of artifacts previously removed from a site should also be noted.

On some wrecks the information requested is not retrievable without excavation. However, excavations are normally done under permit from the **Archaeology Branch.** The diver is asked to remember that these activities, when undertaken in an unsystematic and haphazard manner, have a serious and irreversible negative impact on a site and the integrity of the information present in it.

The Forms and Guide are divided into eight general data categories. Each line on the form is identified by category, then lettered and numbered. This system is common to both forms, and is duplicated in the guide where each form line is explained.

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IDENTIFICATION

A1. BORDEN NUMBER

The Borden Number is assigned by the Archaeology Branch. The Borden grid system is used Canada wide and is based on the NTS 1: 50,000 mapping system. This geographical system allows each archaeological site in Canada to have a unique letter-number identification. Inquiries about Borden Numbers may be addressed to:

RESOURCE INFORMATION SERVICES PROGRAM
Archaeology Branch
Parliament Buildings
Victoria, B.C.
V8V 1X4
Phone: 604-356-1055 Fax: 387-4420

A2. SITE NAME

Provide the name(s), whether geographical or local, by which the wreck has been known locally. If only the vessel's registered name is commonly used, enter in A3 Vessel Name.

EXAMPLE: *Sydney Inlet Mystery Wreck*

A3. VESSEL NAME

Give the vessel's registered name at time of loss. If vessel name is not known, enter "unidentified."

EXAMPLES: *Lord Western*
S.S. Barnard Castle
unidentified

LOCATION

B1. HYDROGRAPHIC CHART NUMBER

Supply the identification number of the Canadian Hydrographic Service chart(s) covering the wreck site vicinity.

EXAMPLE: *3512, 3310.*

B2. LATITUDE

Enter the latitude coordinate of the site in degrees, minutes and seconds. Site latitude is best calculated by taking compass bearings from over the wreck site and plotting the bearings on the working chart/map reference. From this you may calculate latitude as per instructions supplied with FIGURE 1.

B3. LONGITUDE

Done in the same manner as B2 Site Latitude.
Refer to FIGURE 1.

B4. 1:50,000 MAP REFERENCE NUMBER

Supply the National Topographic System (NTS)
1: 50,000 map reference for the site. This information is preferred (but optional) for sites located in navigable tidal water, but essential for sites on interior waterways. Enter as shown.

EXAMPLE: *92B/14*
103J/16

B5. AIR PHOTO REFERENCE

List the reference, or roll and photograph numbers of air photographs that cover the wreck location. Record any air photos with the prefix "B.C." Cite photos from other government or private agencies with the agency name first then other data. Separate multiple entries with semicolons.

EXAMPLES: *B.C. 4231: 31-32; Ministry of Forests, 1967: 36-38;*

B6. UTM GRID

Enter the UTM (Universal Transverse Mercator) Grid zone reference. When an NTS 1:50,000 Map is available enter the UTM grid zone, complete with the Easting and Northing. The UTM grid overlay appears on many, but not all, N.T.S.(National Topographic System) maps. A definition of UTM is given in the Glossary. The method for calculation of the six digit grid is explained on the border of most gridded maps and in FIGURE 1.

PLEASE NOTE: *Eastings are read first, then Northings. There are exactly 2 cm between each grid line (1km on the map), therefore a metric ruler can be used to accurately calculate the 5rd and 6th digits of the grid reference.*

An example of this calculation is provided in FIGURE 1. If the alpha-numeric prefix is marked on the border of the N.T.S. map, it must also be recorded.

When filling out the form the first space is for the grid zone. The next space is for the 100,000 m square identification (eg. CL), and the last two spaces are reserved for eastings and northings (labelled E and N).

EXAMPLES: *9U / CL E 461 N 732*
10U / DP E 379 N 656

B7. MAJOR DRAINAGE

Give the name or description of the major water body such as a strait, inlet, channel, etc., that contains the wreck site. Give major drainage if site is on an interior waterway.

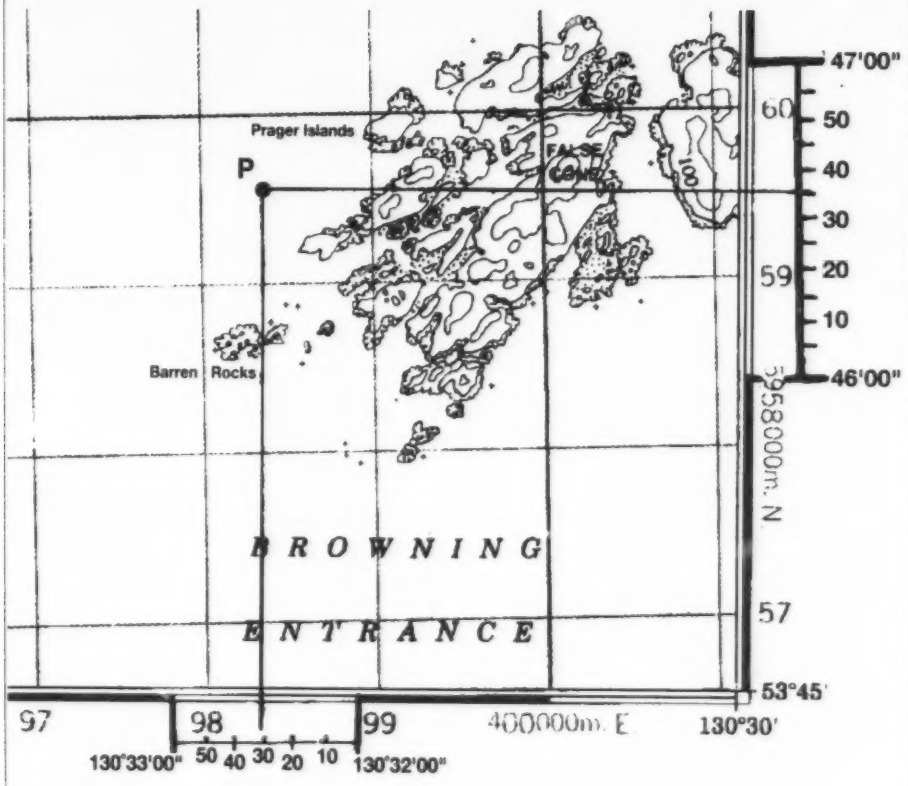
EXAMPLES (COAST): *Howe Sound, Trincomali Channel, Haro Strait.*
(INTERIOR): *Fraser River, Kootenay East, Skeena.*

B8. MINOR DRAINAGE

Give the name or description of the minor water body (harbour, cove, bay, etc.) within the major body containing the wreck site. Give the smaller, immediate fresh water drainage or lake if the site is on an interior waterway.

EXAMPLES (COAST): *Porteau Cove, Montague Harbour, Cadboro Bay.*
(INTERIOR): *Stave River, Wildhorse River, Kootenay Lake, etc.*

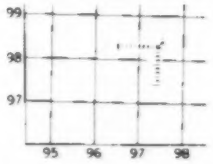
LOCATION



ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 9
QUADRILLAGE DE MILLE MÈTRES
TRANSVERSE UNIVERSEL DE MERCATOR

GRID ZONE DESIGNATION DÉSIGNATION DE LA ZONE DU QUADRILLAGE	100 000 M. SQUARE IDENTIFICATION IDENTIFICATION DU CARRÉ DE 100 000 M.
9U	UK VK

EXAMPLE OF METHOD USED
TO GIVE A REFERENCE TO NEAREST 100 METRES
EXEMPLE DE LA MÉTHODE EMPLOYÉE
POUR FIXER DES REPÈRES À 100 MÈTRES PRÈS



REFERENCE POINT / POINT DE REPÈRE: CHURCH · ÉGLISE (as above) (ci-dessus)

EASTING. Read number on grid line immediately to left of point.
ABSCISSE. Noter le chiffre de la ligne du quadrillage immédiatement à gauche du repère: 97
Estimate tenths of a square from this line eastward to point.
Estimer le nombre de dixièmes du carré entre cette ligne et le repère en direction est: 5
975

NORTHING. Read number on grid line immediately below point.
ORDONNÉE. Noter le chiffre de la ligne du quadrillage immédiatement en dessous du repère: 98
Estimate tenths of a square from this line northward to point.
Estimer le nombre de dixièmes du carré entre cette ligne et le repère en direction nord: 4
984

GRID REFERENCE
RÉFÉRENCE AU QUADRILLAGE: 975984

Nearest similar grid reference 100 000 metres (about 62 miles)
La prochaine référence similaire est à 100 000 mètres (environ 62 milles)

FIGURE 1.

Latitude, Longitude and UTM.

Latitude and Longitude increase from South and East respectively. There are 60 seconds (60") per minute, 60 minutes (60') per degree. Point 'P' is at Latitude 53° 46' 35 and Longitude 130° 32'30". The UTM Reference for point 'P' is 9U VK 984E596N.

B9. LOCATION

Provide a detailed description of the local topographic features which will aid site relocation via hydrographic chart and topographic map (i.e.: references to nearest feature of land, point, island, navigational aid, etc.). Describe the location from general to specific, beginning with a general area description. Site location may be pin-pointed by compass triangulation (specify true or magnetic north) and calculation of distances from features indicated on a cited chart or map, such as hilltops, river or creek mouths, points of land, charted markers, etc.

B10. ACCESS **

Supply detailed information regarding boat and diver access to the site, including nearby major roads, communities, and boat launches, as well as owner's name and address of land used for diver access. This information makes it possible for another surveyor to readily organize a further expedition to the site. It should complement the locational information by referring to features not necessarily found on a chart or map.

B11. ELEVATION

Enter the elevation of the wreck site above or below Hydrographic Chart Datum. Note that the Chart Datum reflects large tide lower low water level recorded for that specific location on the Hydrographic Chart. Enter elevation as a single number followed by BSL (Below Sea Level) or ASL (Above Sea Level). For multiple readings (i.e.: Min/Max) distinct elevations are separated with a semi-colon. To convert feet to metres multiply the number of feet by .3048.

EXAMPLE: *a wreck with its bow section drawing 6 feet and stern resting in 20 feet of water should be described as 20 BSL; 6 ASL, if feet are the unit of measure (see D2).*

NOTE: *for fresh water sites, a second set of elevations relating the wreck site to local mean water level should also be provided.*

SITE DESCRIPTION

C1. VEGETATION **

Identify the floral species present at the site and their abundance in and around the wreck site. Record in order from most to least abundant, separated by semi-colons. Record the percent that each species represents. Where possible also supply scientific names enclosed in parentheses.

Some common species found in British Columbia's coastal waters include: giant perennial kelp (Balanus nubilis); bull kelp (Nereocysts luetkeana); rock weed (Fucus distichus); and eel grass (Zostera marina).

EXAMPLE: *eel grass, (Zostera marina) 30%; rock weed, (Fucus distichus) 25%; etc.*

C2. BOTTOM TYPE

Describe the natural geological characteristics of the bottom in the wreck vicinity. List matrix components in order of decreasing proportions.

EXAMPLE: *fine clay; silt; rocks; coarse gravel; etc.*

C3. ENVIRONMENT

Summarize the maritime environment of the wreck site area, including dynamic conditions that may effect the wreck site. Include information on shorelines, exposure, current, wave action, visibility factors, proximity to shipping lanes, etc.

EXAMPLE: *In an anchorage area, somewhat exposed to Northerlies; 1 knot current on surface during spring tides; visibility variable;*

C4. DESCRIPTION

Provide a general description of the wreck site, documenting the extent and condition of the wreck including attitude (upright, inverted, lying to port or starboard), three-dimensional status (see glossary), scatter extent, etc.

Include a percentage estimate of the original vessel presently intact. Note the overall stability of the wreck's structural remains.

EXAMPLE: *Hull remains sit upright, reduced to 2-dimensional state, approximately 5% of the hull remains in stable condition.*

C5. DISTURBANCE FACTORS

Rate the degree of recent impact in terms of high, medium or low. Include any evidence of human impact such as: dredging, area shipping, shore construction, vandalism, salvage etc. Provide a full description of the these factors or agents affecting the condition of the site. Enter dates of isolated disturbances, if known. Note location of specific impacted areas on the wreck site. Include any evidence of unnatural deterioration i.e.: human impact.

EXAMPLE: *High: port bow section damaged probably due to dragged anchor, between 1986 and 1989; stem post remains disarticulated by diver impact, June 1990; surge continues to erode and scatter material near stern; etc.*

WRECK DESCRIPTION

D1. HULL MAGNETIC ORIENTATION

Enter compass orientation of the hull towards the bow if it can be distinguished. Also list the reciprocal (opposite) compass bearing in parentheses. Do not correct for True bearing. See FIGURE 2.

EXAMPLES: *123° mag.*
90° mag. (270° recip.)

D2. MEASUREMENT UNITS

Note units of linear measurements used for all dimensionally descriptive fields (metres/centimetres, feet/inches). Maintain consistency in measurement units.

EXAMPLE: *metres*

D3. SITE SIZE

Provide the size of the wreck site in the two dimensions which best represent maximum width and maximum length of the area which includes isolated secondary features and the artifact scatter field. See FIGURE 2.

EXAMPLE: *110 x 31*

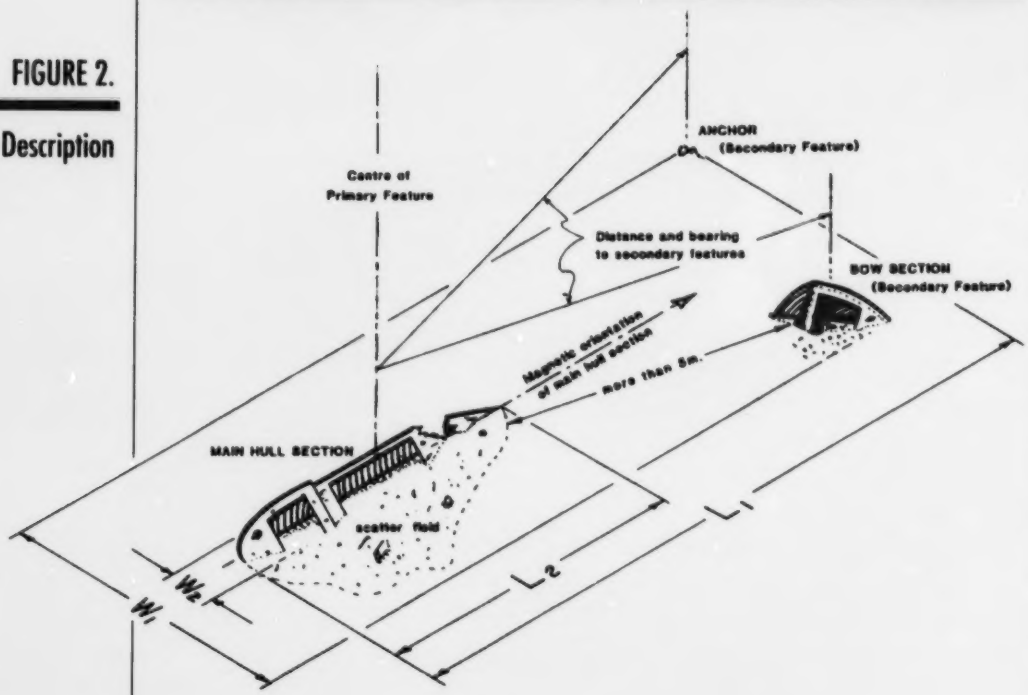
D4. WRECK DIMENSIONS **

Enter the estimated wreck size in two dimensions of the primary site feature, i.e.: the dimensions of the most extensive hull section See FIGURE 2.

EXAMPLE: *54 x 10*

FIGURE 2.

Wreck Description



D5. FEATURE LOCATIONS **

List the location, by magnetic bearing and distance, of isolated features including hull fragments, major machinery, anchors, armaments, etc.

Note: Artifacts or features located more than 5 metres clear of the primary feature should be recorded here. Take the measurements from the approximate centre of the primary feature.

See FIGURE 2.

EXAMPLE: *anchor, 124°, 22m; bow section, 160°, 15m;*

Note: *L1 and W1 define the maximum length and width of the wreck site. These include secondary features and artifact scatter as required in D3 (Site Size). L2 and W2 represent length and width of the primary feature described in D4 (Wreck Dimensions).*

D6. VESSEL LENGTH

List the estimated minimum original length of the vessel hull. Add the section lengths together if the hull is broken up. If the hull is sufficiently intact, measure length from the fore side of the stem post to the aft side of the stern post/transom, and append the entry with "intact length".

EXAMPLE: *31.5 m. (intact length)*

D7. VESSEL BREADTH

List the estimated minimum breadth at the longitudinal centre of the vessel hull. If the hull is sufficiently intact, obtain a precise overall breadth to the outside of the timbers at the widest point and append the entry with "intact breadth".

EXAMPLE: *8.0 m (intact breadth)*

Note: *Data for fields D8 to D10 can only be obtained from well preserved three dimensional wrecks.*

D8. DEPTH OF HOLD **

Measure the maximum depth of the hold from the underside of the main deck to the top of the floor timbers at the keelson. For multiple holds, note which hold is measured i.e.: fore hold, main hold, aft hold etc.

D9. NUMBER OF DECKS **

List the actual or estimated number of decks present in the complete vessel. Follow an estimated number with "*?*". Include partial decks, awnings, weather decks, etc. as individual decks.

D10. NUMBER OF HATCHES **

List the actual or estimated number of cargo hatchways which can be observed. Follow an estimated number with "*?*".

D11. HULL MATERIAL

Enter the construction material(s) of the hull. List the materials and note composite construction. Include wood species whenever possible.

EXAMPLE: *fir planking on iron frames*

D12. HULL CONSTRUCTION STYLE

Enter the style in which the vessel is built. Options include:

A. for wooden hulls: clinker, carvel, diagonally or double planked

B. for iron or steel hulls: flush or lapped plates

D13. STERN TYPE **

List the stern type exhibited by the vessel. Basic stern types include: round, elliptical, counter, square, transom and raked transom. These types are illustrated below in FIGURE 3.

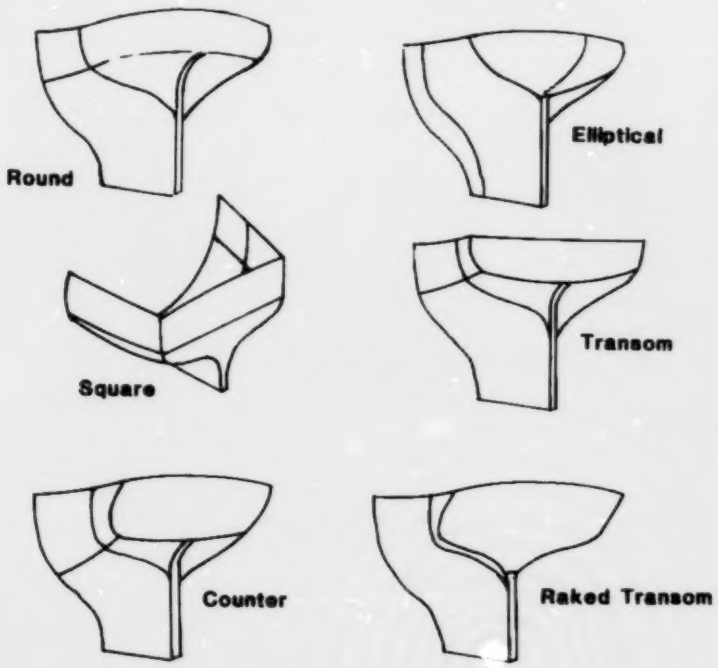


FIGURE 3.
STERN TYPE
(after McKee, 1983)

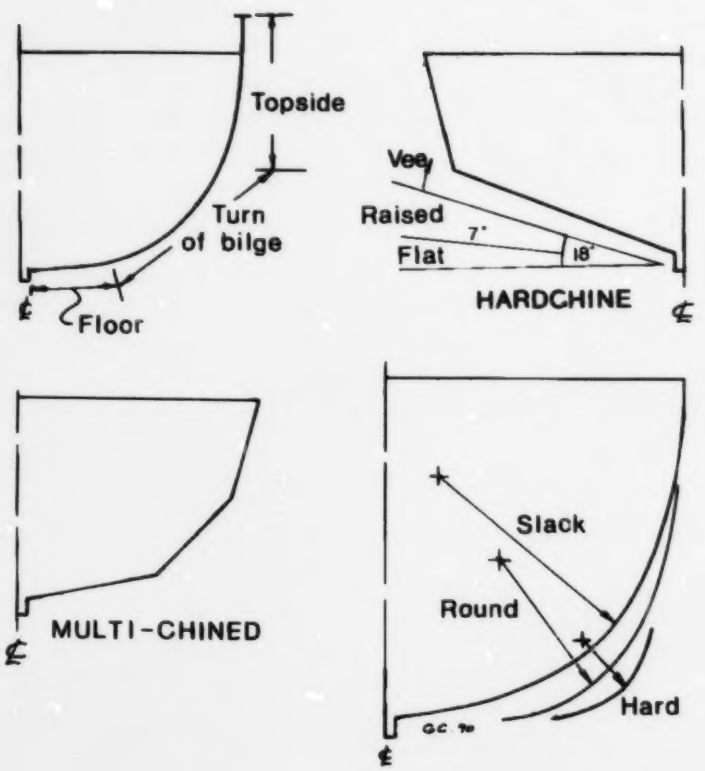


FIGURE 4.
HULL TYPE (AFTER MCKEE, 1983)

D14. HULL CONSTRUCTION TYPE **

Describe hull style and not construction/building or rigging style. Examples of appropriate terminology include: flat-bottomed, slack-bilged, hard-chined, etc. Use the descriptive terms illustrated in FIGURE 4. Note the presence of a centreboard.

Note: *The hull of a vessel may be described in terms of its shape. The midship section (see* FIGURE 5*) is taken where the hull breadth is the greatest and has three vertical components:*

1. *the topside may be plumb (vertical), flare, flam (rounded with overhang) or tumblehome (rounded with inclination);*
2. *the bilge may be hard or multi-chined, or round, refined with the terms hard if the radius of curvature is less than 1/10 of the beam, or slack if radius is more than 1/3 of the beam;*
3. *the floor is vee if the deadrise is greater than 1 in 3, flat if less than 1 in 8, and raised if in between.*

The stem and stern may have either plumb or raked profiles, and may be further described as straight, curved, hollow, or reflex depending on the relative positions of the ends (after McKee, 1983).

D15. HULL SHEATHING

Note the presence or absence of hull sheathing and the material type.

EXAMPLES: *copper, yellow metal, wood, anti-fouling paint.*

D16. RUDDER **

Note the presence of the rudder and its basic measurements. If possible, note how the rudder was hung and whether it was balanced *(see glossary)*.

D17. CAUSE OF CASUALTY

Give site evidence for cause of loss. Site indicators may include burnt timbers, evidence of explosion or scuttling, proximity of natural hazard, etc. Follow any information where there is some doubt about the cause with a question mark.

D18. RIGGING COMPONENTS **

Although these are unlikely to survive, indicate the presence of any rigging material. Note the number and material of masts, bow-sprits, spars, etc. Note number, type, material and dimensions of any shrouds, dead eyes, blocks, belaying pins, chain plates, etc.

WRECK DESCRIPTION MISCELLANEOUS COMMENTS

For this section include any observations pertaining to general wreck description that are not specifically requested in the foregoing Wreck Description Fields. Include responses which require more space than are provided in the fields.

Scantling is a nautical term which refers to all dimensions given for a ship's timbers, planks etc. Timber dimensions are always distinguished by the terms "sided" and "moulded" rather than in non-nautical terms such as: width, thickness, or depth. Non-nautical terms can be ambiguous when used in a nautical context.

FIGURE 5 explains the major components of a wooden vessel (the same terms apply to metal construction) and illustrates how to take the dimensions required in this section.

In this section's Miscellaneous Comments include observations pertaining to scantling dimensions that are not specifically recorded in E1 - E12 or for responses which require more space than is provided there.

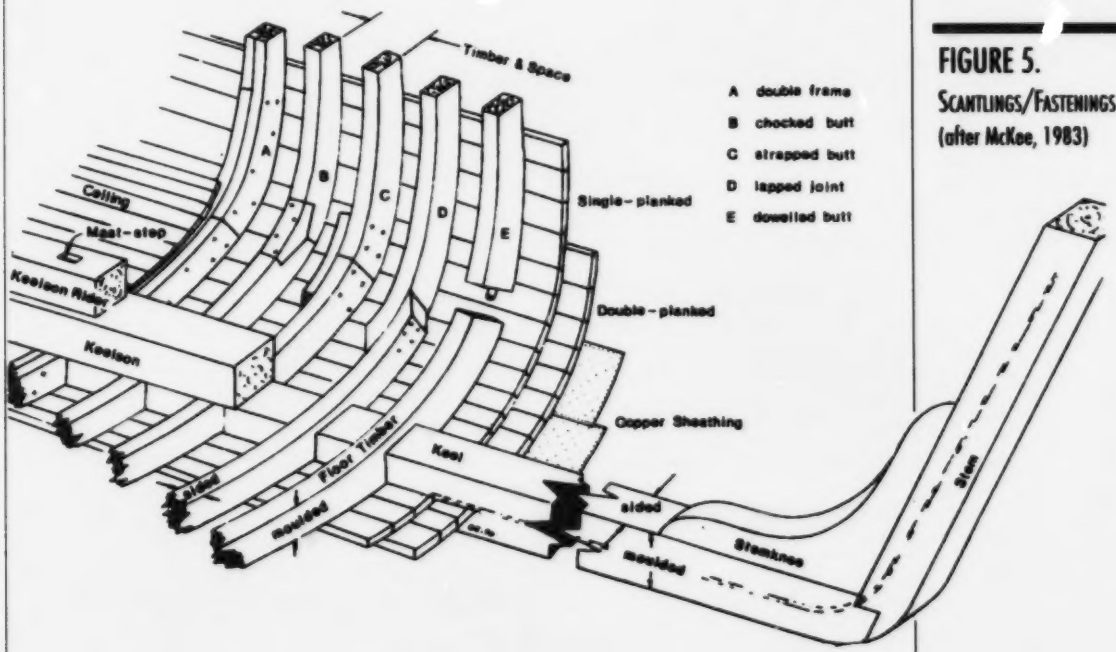


FIGURE 5.
SCANTLINGS/FASTENINGS
(after McKee, 1983)

E1. KEEL DIMENSIONS **

Give the sided/moulded/length dimensions of the keel and the number of component timbers. State whether the keel is a bar, continuous vertical, or intercoastal keel type and if it is iron (see glossary: keel). Otherwise note the wood species if possible.

EXAMPLE: S .33 M .44 L 12.5; *one-piece oak*

E2. KEEL DIMENSIONS **

Provide the sided/moulded/length dimensions of the keelson. If the keelson is built up with several timbers, note and give overall sided and moulded dimensions. Note whether the keelson section is a simple "I", flat plate, or box section type and if it is iron (see glossary: keelson) or wood. Note the wood species if possible.

EXAMPLE: *S 1.15 M .89 L 14.0; three-piece elm.*

E3. MAST STEP DIMENSIONS **

List dimensions and a description of the mast step(s) which typically is a mortise in the keelson with an iron insert. For multiple mast steps, the data should begin with the most forward mast step and work aft.

EXAMPLE: *050 x .030, keelson mortise with iron step collar .40 x .40 inside dim.*

E4. STEM **

Give the sided/moulded/length of the stem and note number of timbers in stem assembly, if possible.

E5. STERN POST **

Give the sided/moulded/length and note the number of timbers in the stern post assembly, if possible.

Note: *Include non-dimensional information on stem and stern posts under Post Notes.*

E6. FLOOR TIMBERS

List the sided/moulded dimensions of a typical floor timber.

E7. TIMBER AND SPACE

List the average timber (sided dimension of the framing timber) and space (distance between two adjacent framing timbers) combined as one dimension. Take this measurement as close to amidships as possible so as to avoid cant frame areas.

E8. ENGINE MOUNTS **

Give the engine mount dimensions in terms of length and width spanning the main engine mounting points.

E9. CEILING **

State the thickness of the ceiling planks *(see glossary)*.

E10. HULL PLANKING

Give the typical thickness of the planking or plating, measured at the lowest possible point on the hull.

E11. HULL FASTENINGS **

Note the presence (number, if applicable) and material of various forms of fastenings i.e.: nails, treenails, bolts, welds, rivets, etc. and sample of dimensions if possible. Also note the general location of the fastenings on the wreck site.

EXAMPLE: *5 iron rivets (.025 x 1.20+) show in stern deadwood; several treenails visible in portside frames; copper sheathing tacks (.025 long) common; etc.*

E12. KNEES **

Provide a sample list of knees visible on site (see glossary: knees). Include material arm lengths, and also the location of finds on the wreck. List the type of knees, if known.

EXAMPLE: *8 oak hanging knees remain along port side, 1.2 x 1.26 av; 1 isolated iron knee (possibly lodging) amidships, .38 x .3+;*

MISCELLANEOUS COMMENTS

Use this part of the form to carry over or add information pertaining to the Scantlings/ Fastenings fields. If a field is carried over enter information preceded by the field number, e.g. E8:.....etc.

F1. PROPULSION

Describe the primary mode of propulsion with one or two entries from the following list: human, motor, sail, sail/motor, sail/steam; steam and screw; steam and side paddle; steam and stern paddle; or unpowered. Separate each entry with a semicolon.

EXAMPLE: *sail/motor; screw;*

F2. NUMBER OF ENGINES

List the number of individual engines used to propel the vessel. The engines may or may not have separate drive trains.

F3. NUMBER OF ENGINE CYLINDERS **

List the number of cylinders on each engine listed in F2, or note if the engine is a turbine type.

F4. CYLINDER DIAMETER **

List the diameter(s) of the engine cylinders for each engine. List varying diameters in ascending order separated by semi-colons if appropriate.

EXAMPLE: *33; .51; .78.*

F5. ENGINE MANUFACTURER'S MARKS **

List in full any serial numbers, patent or maker's marks etc., discernible on the engine(s).

F6. NUMBER OF BOILERS

List the number of boilers as well as shell diameter and length. If possible, note the presence of condensers, heat exchangers, etc.

F7. BOILER MANUFACTURER'S MARKS **

List any serial numbers, patent or maker's marks, etc., discernible on the boiler(s).

EXAMPLE: *2 boilers ea. 3.2x6.1, condenser near engine.*

F8. COAL PRESENCE

Note the presence and general location of coal on the wreck site and also whether the amount is extensive, moderate, or minimal.

EXAMPLES: *Extensive quantities of coal found all over wreck site. Minimal amount of coal slightly abaft of midships.*

F9. DRIVE TRAIN TYPE

Give the type of power transfer utilized in the propulsion system. Options include: reciprocating cylinder with connecting rod, overhead beam, balance beam, "grasshopper" and side lever, for paddle-driven (see glossary: paddle drive trains); or shaft, for screw-driven vessels. List shaft length and diameter if possible.

EXAMPLE: *propeller shaft, 12m long. x 1.5 cm.*

F10. PROPELLER/PROPELLER APERTURE

Provide the diametre(s) of the propeller(s) and size of the aperture. Include the number and size of the blades as well as the material. If there is no propeller, provide the size of the aperture. Include the source of each dimension.

EXAMPLES: *1.82 (aperture); 1.25 (prop); 3 blades; bronze; l:50cm.*

F11. STEERING GEAR TYPE **

List the type or components of the steering gear. Options include: tiller, quadrant, wheel, chain, wire, rope, hydraulic, or mechanical.

EXAMPLE: *wheel steering with wire tackle to quadrant.*

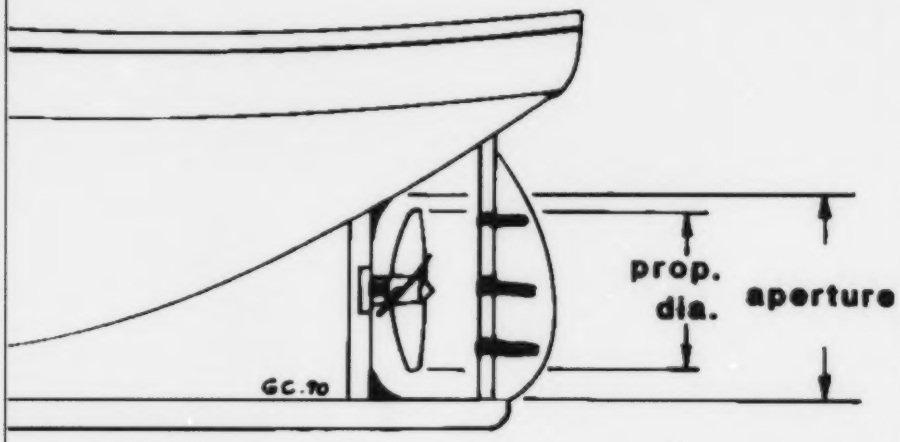


FIGURE 6.
PROPELLOR/PROPELLOR APERTURE

F12. CAPSTAN/WINDLASS **

List dimensions, power source, maker's marks, material and type of capstan and/or windlass(es).

F13. DONKEY ENGINE **

List boiler/engine dimensions, maker's marks, etc.

F14. PUMP DESCRIPTION **

List number, maker's marks, and type of pumps.

EXAMPLE: *1 chain pump, no marks.*

F15. ANCHOR DESCRIPTION

List the number, dimensions (arm width, shank length), and type. See FIGURE 7. If possible, estimate weight of anchors. The original weight in pounds of admiralty pattern anchors (bound wood, fixed, or removable stock) may be calculated by converting the stock length (as a general rule the same dimension as shank length) to inches, and dividing the cube of this figure by 1160. Use a semicolon to separate dimensions from type.

Example: *W 1.54 L 2.05; 1 admiralty w. removable stock (453 lbs).*

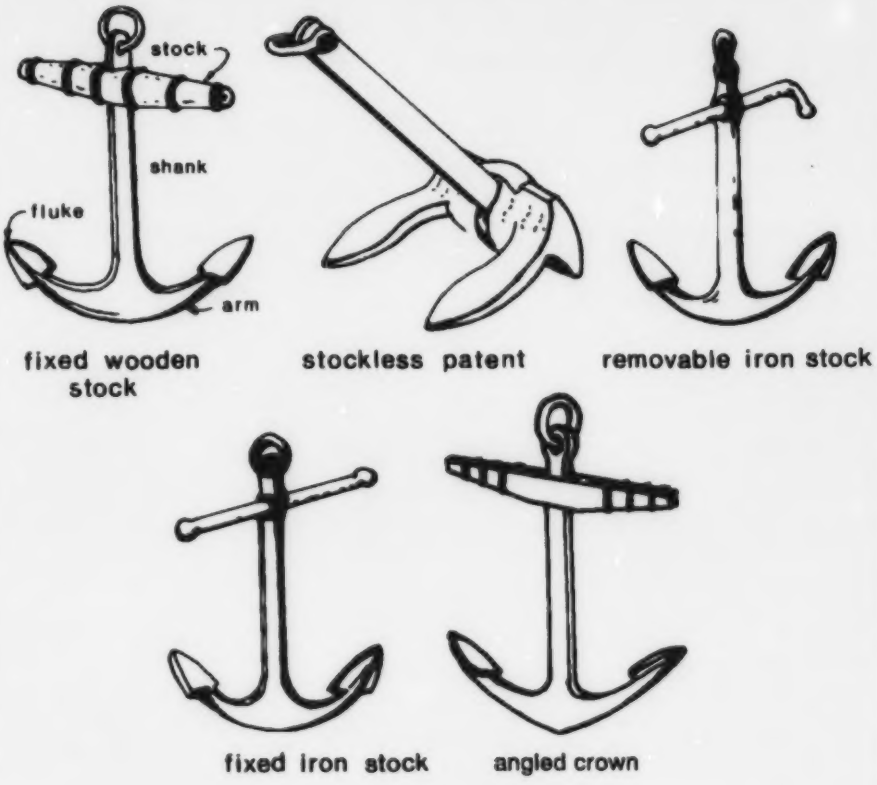


FIGURE 7.
ANCHOR TYPES
(after Desmond, 1919)

F16. ANCHOR CHAIN **

Provide diameter of anchor chain. If possible note whether chain has been forged or cast, and note type of chain according to examples shown in FIGURE 8.

EXAMPLE: *Forged stud link, .052;*

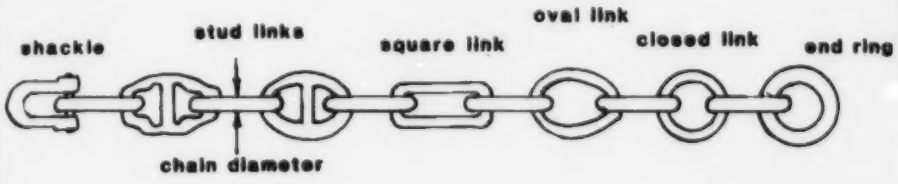


FIGURE 8.
ANCHOR CHAIN

F17. ARMAMENT DESCRIPTION **

List the number, length, bore diameter, material and type (ie: breech loading, rifled, smooth bore, swivelled, etc.) for each gun found at the wreck site.

EXAMPLES: *1 Cannon: smooth bore; 2 Carronade: swivel; 1 Gun: rifled;* 4 AA: *3 inch;*

MISCELLANEOUS COMMENTS

Use this part of the form to carry over or add information pertaining to the Machinery/Equipment fields. If a field is carried over, information should be preceded by the field number, eg. F12:.....etc.

G1. CARGO ARTIFACTS

List, in order of apparent abundance, artifacts which make up the vessel's cargo. Record shipboard stores or equipment in G2. Shipboard Artifacts. Include bulk materials not always considered "artifacts" such as coal, etc.

EXAMPLES: *copper pans; small arms; iron hatchets; stone architectural elements; rough cut timber;*

G2. SHIPBOARD ARTIFACTS

List artifacts found on the wreck site which belong to the ship's regular stores/equipment including navigational instruments, tools, galley implements, personal effects. Indicate the general area on wreck where found.

EXAMPLES: *ship's bell (near bow); telescope (port stern quarter); 2 deck lights and a caulking iron (amidships to port); etc.*

G3. ARTIFACTS REMOVED

List artifacts known to have been removed from the site prior to or during the survey. Provide date of removal, rough site provenance, and current location where possible.

EXAMPLES: *3 ceramic cups removed by salvagers in 1984, believed to have come from the stern section of the ship.*

H1. PERMIT NUMBER

Provide the Permit Number obtained from the Archaeology Branch for the survey or excavation project. List previous permits as well. Place the current permit in the leading position.

EXAMPLE: *1990-85; 1980-3*

H2. REPORTER

List the name(s) and address(es) of the person(s) recording the site information. Normally this is the Permit holder. Record previous surveyors as well. Separate each group of visitors (or individuals) with a semicolon. Record from most recent to oldest.

H3. REPORT DATE

List the date(s) on which the wreck site survey(s) was carried out. The format is: year/month/day. Record in the same order as those in H2 (Reporter).

EXAMPLE: *89/07/01*

H4. INFORMANT

List the name(s) and address(es) of any person(s) who revealed the site to the surveying body, and any persons who may have significant knowledge about the wreck site.

H5. AFFILIATED INSTITUTE/ORGANIZATION

List the full name of the institution or organization sponsoring, or affiliated with, the wreck site survey. Normally this is the institution where the survey data will be filed.

EXAMPLE: *UASBC*

H6. COLLECTIONS

List the general description of the artifacts collected by the surveying organization, including provenance and dates of acquisition. Provenance data supplied here may be general, but all artifacts removed should have their positions pinpointed on site maps, while triangulation data should be recorded in notes and on artifact inventory forms. Artifacts in private collections should be noted in G3 (Artifacts Removed).

H7. DATA LOCATION/AGENCY

Provide the name of the permanent repository housing collected archival material, survey notes, dive logs, maps, sonar printouts and photographic records acquired during the survey project.

EXAMPLE: *Vancouver Maritime Museum*

H8. PHOTOS

List the identification numbers of all photographs taken of the wreck site and artifacts. Record in the following format:
surname, initial(s); year/month/day (or range of days, eg. 89/08/12-89/08/16); Storage Location; Roll # ; Exp. #(s);

H9. FILM/VIDEO

List the identification numbers of film reels or videocassettes taken of the wreck site. Also note surname, initial(s); year/month/day (or range of days); storage location.

H10. REMOTE SENSING

List identification and type of any remote sensing data (sonar printouts, etc.) compiled on the wreck site. Also note name, date and storage location.

H11. HISTORICAL SIGNIFICANCE

Describe the International, National or Regional historical significance of the wreck site and suggest whether this site warrants further research, given its significance.

EXAMPLE: *Regionally significant: the Hudson's Bay Company Steamer Beaver;*
Internationally significant: the caloric ship Ericsson.

H12. ARCHAEOLOGICAL SIGNIFICANCE **

Describe the archaeological significance of the site and reasons why this site warrants further research. Examples of archaeologically significant wrecks would include those which contribute to the study of the evolution of ship construction, the establishment of artifact typologies, the evolution and application of technology and materials, etc. Some sites also offer potential for studies of sport diver impact, natural site deterioration rates, artificial reefs, etc.

H13. PRIORITY **

Summarize the overall importance of the site reflecting H11 (Historical Significance) and H12 (Archaeological Significance) in terms of "high," "medium," or "low" priority.

H14. PROTECTED STATUS **

Note whether the site is presently protected by special provincial or federal heritage designation and list the order in council(s) etc.

EXAMPLE: *Heritage Conservation Act; OIC Number 2791; February 1972;*

GLOSSARY

AFT: Behind, in, near, or toward the after or stern part of the vessel.

AMIDSHIPS: Or midships; the middle portion of the vessel.

APERTURE: An opening cut into a solid structure, as with the propeller aperture cut into the stern deadwood, rudder blade, or sternpost, to accept a centerline-mounted propeller.

ATHWARTSHIP: Across the vessel, orientated perpendicularly to the longitudinal axis of the vessel.

BALANCED RUDDER: A rudder whose stock is not on the leading edge, but some distance to the rear of it.

BEAM: The breadth of the vessel at its widest point; a timber mounted athwartships to support decks and provide lateral strength, etc.

BILGE: The lowest part of the hull's interior on either side of the keel. The turn of the bilge is the transition of the hull shape from essentially horizontal to vertical in section, described as hard if the transition is relatively abrupt, or slack if the transition is gradual.

BLOCK: Generally described on land as a 'pulley'. The grooved wheel utilized in the block is termed a sheave and it fits into the sheave-hole or swallow in the block. Blocks may be single, double, triple, fourfold-sheaved, etc., according to the number of sheaves carried. Not all blocks however, are furnished with sheaves and may be termed deadeyes or blind pulleys. When two or more blocks are used to move a single weight, they constitute a tackle.

BULKHEAD: A structurally integral 'wall' inside the hull, usually transverse but occasionally aligned fore-and-aft.

BULWARK: A parapet, or extension of the hull planking above the weather deck, and carried round the vessel providing protection from weather.

CANT FRAME: A frame canted, or mounted obliquely to the keel so that its cross section remains more nearly rectangular along the in-curving ends of the vessel.

CAPSTAN: A machine for hauling heavy cable, such as hawsers or warps, with its barrel set in a vertical position.

CARVEL: The method of covering a vessel's frame with planking or strakes laid edge to edge and secured to the frame with nails or treenails so as to form a smooth outer skin. See clinker.

CEILING: Planking covering the frames on the inner side of the hull. Larger timbers in the same position intended for strengthening are termed walings or thickstuff.

CENTREBOARD: (Or centreplate, or drop keel). A movable plate of iron, wood, or lead that may be let down below the keel, about midships, in order to reduce lee way when under sail. The centreboard is housed within a watertight compartment termed the trunk, or keel box.

CHAINPLATE: Often referred to as a channel plate, these are iron or steel plates attached to the outside of a vessel's hull to which are connected the deadeyes by which the shrouds are secured. In larger vessels the plates may be replaced with chains.

CHANNEL: Ledges built out from the sides of the hull to keep shrouds clear of the bulwark.

CLINKER: (or Clencher); Hull planking running fore-and-aft with the lower edge of each strake overlapping outboard the upper edge of the plank below it. Clinker strakes are usually secured to each other by nails with roved heads (i.e. the nail ends have a flat washer placed over them and are then mushroomed over with a hammer). See carvel.

COMPOSITE CONSTRUCTION: A vessel built of both iron and wood, as typical in the late 19th century, is said to be of composite construction. Generally the knees, frames, and occasionally keel, keelson, and bulkheads may be of iron while the planking, decks and spars are of wood.

DEADEYE: Wooden, usually large, disc through which holes allow the passage of thin ropes or lanyards. The number of holes is generally three, but may be less, particularly in the case of the heart which has a single eye, serrated at the bottom to grip the lanyard. The deadeye is used as a block connected to the shrouds or chainplates and is called 'dead' due to the lack of a sheave.

DEADRISE: The amount a floor (or floor timber) rises away from the keel, often expressed as an angle or slope, and generally measured amidships.

DEADWOOD: Composite of heavy timbers and functioning as fill between keel and keelson at either end of the hull. Referred to as the fore deadwood and after deadwood respectively.

DIAGONAL PLANKING: Multiple layers of thin planks laid up diagonally.

DONKEY ENGINE: A small engine aboard the ship utilized to power a capstan, windlass, etc.

DOUBLE PLANKED: (or Double Bottomed). Where the hull skin is composed of two layers of watertight planking. Generally, the inner layer is thinner than the outer.

FEATURE: The primary feature of the wreck site is the largest surviving hull section. This may be the entire hull, or only one section of several. In the event of multiple surviving sections, once a section has been designated the primary feature, all other features are designated as secondary features if they are located at least 5 metres clear of other hull sections. Isolated pieces of machinery, anchors, armaments, etc., if clear by the same distance, may also be considered secondary features.

FLOOR TIMBER: The lowest frame element timber which crosses the keel, and is usually heavily fastened to the keelson and/or keel. The timbers rising above the floor timbers are referred to as futtocks. The top futtock may be given a number, as in 'third futtock', or designated as the top timber, or head timber.

FLUSH PLATE: In reference to hull skins of metal plate, where the plate edges do not overlap but are placed edge to edge, analogous to wooden carvel construction. Generally found on welded steel vessels.

FRAME: An assemblage of timbers set athwartship from keel to sheer providing the principal structural strength to the hull planking. Frames are often incorrectly called ribs. Each frame may consist of one floor timber, a number of futtocks, and a top timber, or top futtock, on each side of the keel.

GARBOARD: (or Garboard Strake). The lowermost strake on the hull, and that which is rabbeted into the keel.

HATCH/HATCHWAY: An opening in the deck of a vessel through which cargo is placed in the hold. It is covered by a movable frame or roof called a hatch. A small hatchway used primarily for the movement of persons is usually referred to as a companionway or scuttle.

HARDCHINE: A term applied to a vessel when the sides meet the bottom, or bilge, at a sharp angle rather than being rounded.

KEEL: The principle longitudinal timber in most vessels. The keel is terminated at either end of the vessel in the stem and stern posts, which together form the backbone of the hull assemblage. In composite, or iron or steel construction, when the keel is set below the frames (as in wooden construction) it is called a bar keel. When the iron keel is set between the frames it is termed an intercostal keel. When no keelson is apparent, the frames being let directly into the keel with no extension above or below the frames themselves, the assembly is termed a continuous vertical keel.

KEEL BOX: (or Trunk). A watertight housing into which fits a centreboard, or drop-keel when retracted.

KEELSON: (or Kelson) a longitudinal strengthening timber(s) which rests upon the floors and is generally bolted through the floor timbers to the keel in wooden ships. In many vessels the keelson also takes the maststep. When additional timbers are laid alongside the keelson, these are termed sister keelsons; those laid atop the main keelson are termed rider keelsons. In composite and iron or steel ships, the keelson may be either a simple I beam or flat plate; or have a box configuration.

KNEE: Generally heavy members of wood or iron, used to strengthen angular junctions. The interior curvature between the two arms of a wooden knee usually follows the line of a naturally grown crook. These were among the first members to be replaced with iron in composite ship construction. Knees may by defined by location and alignment as follows: the breasthook (also stemlock or forehook) is set horizontally inside and near the head of the stem; a dagger knee is set obliquely; a hanging knee is one set upright with the horizontal arm to the top; a lodge, or lodging knee is set horizontally, usually in the plane of deck beams; a standing knee is set upright with the horizontal arm on the bottom.

LAPPED PLATE: In reference to metal-plate hull skins, where the plates are lapped over one another at their edges, analogous to wooden clinker construction. Lapped plates are generally of iron and fastened with heavy bolts or rivets.

MULTI-CHINED: A term applied to a vessel when the transition from the bottom, or bilge, to side is accomplished by several relatively sharp angles, rather than being rounded.

MAST-STEP: The point where the heel, or foot, of the mast is received. Large timbers fixed across the keelson may serve to anchor the mast heel, or a mortise may be cut directly into the keelson to receive a mast tenon, or inset cast iron step.

MIDSHIP BEAM: The longest beam of the vessel at the point of greatest breadth.

MERCATOR: see UTM.

MORTISE: A cavity, usually square, cut into the surface of a timber into which fits the tenon of another in order to form a joint.

GLOSSARY

MOULDED DIMENSION: The measure across a timber face to which a mould, or curvature guide, would be laid. In general, moulded faces of single timbers are parallel to each other. e.g. for a floor timber in place, the vertical dimension is the moulded dimension.

NAIL: A small headed and pointed piece of metal driven though a piece of wood to fasten it to another. Relatively, longer and heavier examples are termed spikes, or double nails. Nails may be distinguished by material and mode of preparation. i.e. nails may be wrought or forged, cut, or cast. They may be further defined by the shape of the head or point, such as rose, diamond, and sharp, or chisel.

PADDLE DRIVE: The mechanism employed to transfer energy from the engine to the paddle propeller(s). *Examples of types are:* direct drive facilitated by mounting a single cylinder engine diagonally, with its piston head down; or an oscillating mount where the cylinder itself is mounted on a pivot. The overhead beam type has a vertical connecting rod swinging an overhead horizontal beam pivoted at its middle, which in turn transfers the power to the paddle shaft. A side lever engine utilizes a beam pivoted at its centre, but the beam is offset beside the cylinder. The 'grasshopper' engine also uses a side- mounted beam, but one pivoted at one end, with the paddle shaft drive connecting rod attached roughly halfway along the beam's length.

PLANKING: A series of planks, or strakes, used to form the outer skin of the vessel. In shipbuilding terms, a plank is any wooden element from one and a half to four inches in thickness.

PINION: A small cog wheel engaging with a larger one or a logged spindle engaging with a wheel.

PUMPS: Bilge pumps may utilise one of three types of action:

1. Piston-suction: piston rod with a flapper valve operated by lever or flywheel with single or double action.
2. Diaphragm: action comes from a rubber lined metal disk working at deck level.
3. Chain Pump: consists of a series of flanges mounted on a circular chain in a u-shaped pipe.

QUADRANT: A metal plate, often triangular, fitted horizontally to the head of the rudder stock to receive the steering chains or cables. The quadrant may be toothed to receive the pinion of a steering engine.

RABBET: (or Rebate) a groove incised along a timber to receive the edge of a plank or strake. The most common rabbets are the keel rabbet which receives the garboard, and the rabbet of the stem and stern post which receives the strake ends.

RIVET: A metal pin, or fastening, with both ends clenched, or peened over, often over washers and done while hot.

RUDDER STOCK: The primary piece of the rudder, set in a vertical, or near vertical, position about which the rudder pivots. A rudder is said to be balanced if the stock is not on the leading edge, but aft of it.

SCATTER FIELD: The area of artifacts, features, and debris associated with a single wreck.

SCARPH: The joint where two pieces of timber are let into one another so as to appear to be one solid timber. Scarphs are called vertical if the surfaces (of the joint) are parallel to the sides of the timber, or horizontal when the surfaces are opposite. They are often set with a hook or projection, and keyed. Scarphs are common in long timbers such as the keel or keelson.

SHEATHING: A thin layer of yellow pine, lead, or copper covering the hull of a vessel below the waterline in order to protect against wood borers and fouling. Generally, the sheathing is laid over a mixture of tar and hair or paper.

SHEER: The curve of the deck or gunwale as viewed from the side.

SHROUD: Rope or wire standing rigging used to support masts athwartship.

SIDED DIMENSION: The measure of a timber face which takes a curve; i.e. for a floor in place, the fore and aft dimension of the face upon which the keelson rests is the floor timber's sided dimension.

SPIKE: See nail.

STEM: The principal timber at the forepart of a vessel which stands upright and often is composed of several pieces. When the stem is of composite nature, the forwardmost added element is termed the false stem, and the innermost the apron. The stem is always firmly secured to the keel and strengthened by the fore deadwood. The stem also receives the ends of the hull planking, thus joining the two sides of the vessel.

STERN POST: The principal timber at the stern upon which the rudder is hung, and to which the transom and/or planking ends are secured. Like the stem, the sternpost is firmly attached to the keel and is usually strengthened by the aft deadwood.

STRAKE: One line of hull planking extending the full length of the vessel. Several planks, placed end to end, may form a strake. Strakes may be defined according to position as follows: the garboard strake is the lowest and rabbets into the keel; the sheer strake, directly below the upper edge of the hull side, is a heavy strake which forms the curve of the top-side, and acts as a chief strengthening agent there. A wale is the heaviest strengthening stake, located midway between the waterline and the sheer.

TENON: (or Tenant). The end of a piece of wood fashioned into a shape, usually rectangular, which is received by a cavity of like dimensions, termed the mortise, in another piece.

THREE-DIMENSIONAL SITE: A wreck site with substantial structural elements surviving, and standing clear of the seabed.

TILLER: An arm of wood or metal fitted to the head of the rudder stock through which steering leverage is transmitted either from the steering linkage, or directly by the helmsman on smaller vessels.

TIMBER: A general term applied to heavy wooden members used in ship construction, or specifically to those which form the vessel's frames.

TIMBER AND SPACE: Or room and space. Frame spacing expressed as the distance from the fore side (moulded face) of one frame to the fore side of the next forward or aft frame.

TREENAIL: or trunnel; a wooden drift or dowel driven into the frame by which the hull strakes or planking may be secured to the ship's timbers. Treenails are also commonly used to secure wooden knees, and in scarphs etc.

TWO-DIMENSIONAL SITE: A wreck site with generally no less than one metre of the structure, excluding machinery, boilers, etc., standing clear of the seabed.

UTM: The Universal Transverse Mercator Grid. In its simplest form the Transverse Mercator Projection is the projection of a sphere onto a cylinder wrapped around it with contact along a meridian. The term Transverse denotes the fact that the cylinder is in contact along a meridian instead of along the equator. The grid units shown on a 1:50,000 map consists of vertical lines parallel to the central (Greenwich) meridian and straight horizontal lines parallel to the equator. Vertical lines are measured from the Greenwich meridian and horizontal ones are measured from the equator. An application is illustrated in Figure 1.

WINDLASS: A machine for working cables, and often used in weighing anchors, and generally mounted in the bows of the ship. The windlass is distinguished from a capstan by having the barrel, or cable spool in a horizontal position.

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DETAILED SHIPWRECK RECORDING FORM

A1. Borden Number: _____

A2. Site Name: _____

A3. Vessel Name: _____

DETAILED FORM

British Columbia
Detailed Shipwreck Recording Form

LOCATION

B1. Hydrographic Chart Number(s): _____

B2. Lat: _____ ° _____ ' _____ " **B3.** Long: _____ ° _____ ' _____ "

B4. Map Ref. No _____/_____/_____ **B5.** Air Ref: _____

B6. UTM/MIL Grid: _____/_____/_____E_____N_____

B7. Major Drainage: _____

B8. Minor Drainage: _____

B9. Location: _____

_____

_____

_____

_____

B10. Access: _____

_____

_____

_____

_____

B11. Elevation: _____

_____

_____

_____

SITE DESCRIPTION

C1. Vegetation: _____

_____

_____

C2. Bottom Type: _____

_____

C3. Environment: _____

_____

_____

_____

C4. Description: _____

_____

_____

_____

C5. Disturbance Factors: _____

_____

_____

WRECK DESCRIPTION

D1. Hull Orientation: _____ **D2.** Measurement Units: _____

D3. Site Size: _____ x _____ **D4.** Wreck Dimensions: _____ x _____

D5. Feature Location(s): _____

_____

_____

_____

D6. Vessel Length: _____ **D7.** Vessel Breadth: _____

D8. Depth of Hold: _____ **D9.** No. of Decks: _____ **D10.** No. of Hatches: _____

D11. Hull Material(s): _____

_____

D12. Hull Construction Style: _____

D13. Stern Type: _____

D14. Hull Type: _____

D15. Hull Sheathing: _____

D16. Rudder: _____

D17. Casualty Cause: _____

D18. Rigging Components: _____

Misc. Comments: _____

_____

_____

_____

SCANTLINGS/FASTENINGS

E1. Keel: s_____m _____l_____; _____

E2. Keelson: s _____m _____l_____; _____

E3. Mast Step(s): _____

E4. Stem Post: s_____m _____l_____ _____ _____

E5. Stern Post: s_____m _____l _____

Post Notes: _____

_____

_____

E6. Floor Timbers: s _____m_____

E7. Timber and Space: _____

E8. Engine Mounts: w_____l_____

E9. Ceiling: _____

E10. Hull Planking: _____

E11. Hull Fastenings: _____

_____

_____

E12. Knees: _____

Misc. Comments: _____

_____

_____

_____

_____

MACHINERY EQUIPMENT

F1. Propulsion: _____

F2. No. of Engines: _____ **F3.** No. of Engine Cylinders: _____

F4. Cylinder Diameter(s): _____; _____; _____; _____; _____

F5. Engine Manufacture Marks: _____

_____

_____

F6. Number of Boilers: _____; _____

F7. Boiler Manufacture Marks: _____

_____

_____

F8. Coal Presence: _____

F9. Drive Train Type: _____; shaft length: _____

F10. Propeller: _____

F11. Steering Gear Type: _____

_____

F12. Capstan/Windlass: _____

F13. Donkey Engine: _____

F14. Pump Description: _____

F15. Anchor(s): w _____ l _____, _____, _____ lbs;

w _____ l _____, _____, _____ lbs;

w _____ l _____, _____, _____ lbs;

F16. Anchor Chain: dia _____, _____

F17. Armament Description: _____

_____

Misc. Comments: _____

_____

_____

_____

_____

ARTIFACTS

G1. Cargo Artifacts: _____

_____

_____

_____

G2. Shipboard Artifacts: _____

_____

_____

_____

G3. Artifacts Removed: _____

_____

_____

_____

RECORDING INFORMATION

H1. Permit Number: _____

H2. Reporter(s): _____

_____

_____

Address(es): _____

_____

_____

H3. Report Date: _____

H4. Informant(s): _____/ _____/ _____

Address(es): _____

_____

_____

H5. Affiliated Institute/Organization: _____

_____

H6. Collections: _____

H7. Data Location/Agency: _____

H8. Photos: _____

H9. Film/Video: _____

H10. Remote Sensing: _____

H11. Historical Significance: _____

H12. Archaeological Significance: _____

H13. Priority: _____

H14. Protected Status: _____

BASIC SHIPWRECK RECORDING FORM

A1. Borden Number: _____

A2. Site Name: _____

A3. Vessel Name: _____

BASIC FORM

British Columbia
Basic Shipwreck Recording Form

LOCATION

B1. Hydrographic Chart Number(s): _____

B2. Lat: _____° _____' _____" **B3.** Long: _____° _____' _____"

B4. Map Ref. No: 5_____/____/_____

B5. UTM/MIL Grid: _____/_____E_____N_____ **B7.** Major Drainage: _____

B8. Minor Drainage: _____

B9. Location: _____

_____

_____

_____

B11. Elevation: _____

SITE DESCRIPTION

C2. Bottom Type: _____

C3. Environment: _____

_____

_____

C4. Description: _____

_____

_____

_____

C5. Disturbance Factors: _____

_____

_____

_____

WRECK DESCRIPTION

D1. Hull Orientation: _____ _____

D2. Measurement Units: _____

D3. Site Size: _____ x _____

D6. Vessel Length: _____

D7. Vessel Breadth: _____ _____

D11. Hull Material(s): _____

_____

_____

D12. Hull Construction style: _____

_____

D15. Hull Sheathing: _____

D17. Casualty Cause: _____

Misc. Comments: _____

_____

_____

_____

SCANTLINGS/FASTENINGS

E6. Floor Timbers:s _____ m _____

E7. Room and Space: _____

E10. Hull Planking: _____

_____

Misc. Comments: _____

_____

_____

_____

_____

MACHINERY/EQUIPMENT

F1. Propulsion: _____

F2. Number of Engines: _____ **F6.** Number of Boilers: _____

F9. Drive Train Type: _____ shaft length_____

F10. Propeller: _____

F15. Anchor(s):w _____l _____,_____,_____lbs;

w _____l _____,_____lbs;w __ _____l_____,_____, _____lbs;

F17. Armament Description:_____ _____

_____

Misc. Comments: _____

_____

_____

_____

ARTIFACTS

G1. Cargo Artifacts: _____

_____

_____

G2. Shipboard Artifacts _____

_____

_____

G3. Artifacts Removed: _____

_____

_____

RECORDING INFORMATION

H1. Permit Number:_____ **H2.** Site Reporter(s): _____

_____

_____

_____

Address: _____

_____

_____

H3. Report Date: _____/_____/ _____

H4. Site Informant: _____

Address: _____

H5. Affiliated Institute/Organization: _____

H7. Data Location/Agency: _____

_____

H8. Site Photos: _____

_____

H9. Site Film/Video: _____

_____

H10. Site Remote Sensing: _____

_____

H11. Historical Significance: _____

_____

_____